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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/796,344

03/09/2004

Yuichiro Ohta

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7590 12/23/2008
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| EXAMINER |
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LUND, JEFFRIE ROBERT

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| ART UNIT | PAPER NUMBER |
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1792

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| MAIL DATE | DELIVERY MODE |
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12/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/796,344 | Applicant(s) OHTA, YUICHIRO | |
| | Examiner Jeffrie R. Lund | Art Unit 1792 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/17/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 22 and 26 is objected to because of the following informalities: in line 6 of claim 1 "vacuum." should read --vacuum--; and in line 5 of claim 26 "On" should be --on--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicants Admitted Prior Art (AAPA) in view of Watanabe, JP 57-116947.

The AAPA discloses vacuum bonding chamber 16 for bonding liquid crystal display devices that include: a floor panel 50; a vacuum chamber 16 provided on the floor panel; a couple of vacuum pumps 18 provided on the floor panel and aligned parallel to each other with a gap therebetween; a pipe 30 connecting the vacuum chamber to each of the vacuum pumps for evacuating the vacuum chamber; and a flexible pipe 36 included in a part of the pipe; an inlet pipe 32, provided on the top part, vacuum chamber side of the pumps, included in a part of the pipe for connecting the flexible pipe to each of the corresponding vacuum pumps. (Specification and Figures)

The AAPA differs from the present invention in that AAPA does not teach: a fixing block provided on the floor panel; a vibration transmission suppressing

mechanism for maintaining a distance between the inlet pipe and the fixing block in an extending direction of the flexible pipe so as not to shrink the flexible pipe at a time of evacuation, wherein and the vibration transmission suppressing mechanism is provided between the vacuum pumps.

Watanabe teaches a vibration transmission suppressing mechanism 9 for maintaining a distance between the inlet pipe and a fixing block (9a-2, 9b-2) in an extending direction of the flexible pipe so as not to shrink the flexible pipe at a time of evacuation for maintaining a distance between the inlet pipe and fixing block. (Abstract and figures)

The motivation for adding the vibration transmission suppressing mechanism of Watanabe to the apparatus of AAPA is to prevent vibration transmission to the vacuum chamber caused by the movement of the vacuum pump. Furthermore, it has been held that applying a known technique to a known device ready for improvement to yield predictable results is obvious (see *KSR International Co. v. Teleflex Inc.*).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the vibration transmission suppressing mechanism of Watanabe to the apparatus of the AAPA.

4. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicants Admitted Prior Art (AAPA) in view of Sekiguchi et al, JP 61-008479, and Elliotte JP 57-116947.

The AAPA discloses vacuum bonding chamber 16 for bonding liquid crystal display devices that include: a floor panel 50; a vacuum chamber 16 provided on the

floor panel; a couple of vacuum pumps 18 provided on the floor panel and aligned parallel to each other with a gap therebetween; a pipe 30 connecting the vacuum chamber to each of the vacuum pumps for evacuating the vacuum chamber; and a flexible pipe 36 included in a part of the pipe; an inlet pipe 32, provided on the top part, vacuum chamber side of the pumps, included in a part of the pipe for connecting the flexible pipe to each of the corresponding vacuum pumps. (Specification and Figures)

The AAPA differs from the present invention in that AAPA does not teach: a fixing block provided on the floor panel; a vibration transmission suppressing mechanism for maintaining a distance between the inlet pipe and the fixing block in an extending direction of the flexible pipe so as not to shrink the flexible pipe at a time of evacuation; and the vibration transmission suppressing mechanism is: a chain block provided between the vacuum pumps and parallel to and on an opposite side of each of the inlet pipes with respect to the vacuum pump; includes a quadrangular bar fixed to each of a rising portion of the inlet pipes and a chain block fixed to a central part of the quadrangular bar.

Sekiguchi et al teaches that vacuum bellows 26 in an exhaust line 27 between a vacuum pump 28 and a vacuum chamber 11 contracts under vacuum pressure, and that a chain 35 can be used to prevent movement of bellows in a direction away from the chain.

Elliott teaches preventing the movement of a flexible hose 59 with a quadrangular bar 43 supporting load elements 41 with a chain 103 attached to fixing blocks (one block 104 attaches the chain 103 to the bar 43 and a second block (not

number) attaches the second end to a support 102). The chain is provided between the load elements and parallel to and on an opposite side of each end of the load elements. (Figure 1 and 2)

The motivation for adding the quadrangular bar, chain, and blocks of Elliotte between and parallel to the vacuum pumps of the apparatus of AAPA is to prevent the bellows from contracting and moving the vacuum pumps as taught by Sekiguchi et al and Elliotte. Furthermore, it has been held that applying a known technique to a known device ready for improvement to yield predictable results is obvious (see *KSR International Co. v. Teleflex Inc.*).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the quadrangular bar, chain, and blocks of Elliotte to prevent the bellows from moving in the apparatus of the AAPA as taught by Sekiguchi et al.

Response to Arguments

5. Applicant's arguments with respect to claims 22-26 have been considered but are moot in view of the new grounds of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (10:00 am - 9:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jeffrie R. Lund/
Primary Examiner
Art Unit 1792

JRL
12/20/08